

A. Control Measure Under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, \$\$)	H. Additional Information
11 South Carolina State Measures							
Comments: Modeling for 2007, shows attainment without including measures beyond national and regional measures already finalized. 2012 and 2017 also shows attainment.							
11 Central Midlands, SC (Effective date of nonattainment designation deferred) Richland County							
Create a regional partnership to deal with air quality issues	Following a meeting with Myra Reece, Bureau Chief for SCDHEC's Bureau of Air Quality, on October 5, 2006, the Richland County Administrator began dialogue with the Lexington County Administrator to gauge Lexington County's interest in undertaking a regional approach to air quality issues, coordinated by the Central Midlands Council of Governments. Lexington County has expressed interest in a regional approach. A letter will be drafted to the COG in early 2007, and signed by the administrators of both counties.	While this measure is currently in the earliest stage, this represents a significant step forward in bringing both counties together in an effort to solve a regional issue on a regional level.	October 5, 2006, letter to be drafted early 2007				
Participation in Early Action Compact Summit	Richland County was the location for SCDHEC's first ever statewide Early Action Compact Summit on August 16 and 17, 2006. The conference was attended by over 200 participants. A number of information sessions were held on topics such as alternative fuels, education and outreach, and land use. A number of vendors were also on hand to promote energy saving and pollution-reducing technologies.	A number of county staff attended the summit, including the Research Manager/EAC Contact, Joe Cronin; Grants Manager, Audrey Schillflett; Fleet Manager, Bill Peters; and Planning Manager, Michael Criss. Many local leaders, such as the Mayor of Blythewood, Pete Amoth, were also in attendance.	August 16 and 17, 2006				
SCE&G SO2 Wet Scrubber for Wateree Station	SCE&G, Fossil-Hydro Generation, has initiated an Engineer/Procure/Construct (EPC) contract with Fluor Corporation to place into operation a single tower SO2 wet scrubber for Wateree Station. The current plan has both units at Wateree discharging the flue gases into a single wet SO2 scrubber tower. While SCE&G has not yet finalized the equipment supplier, they anticipate a wet SO2 scrubber optimal removal efficiency to be 92-98%. Based on 2005 SO2 emissions, and factoring in maintenance and operating conditions, a removal rate of approximately 40,000 Tons annually may be achievable. Until the final supplier is selected and actual performance information is measured on the completed project will we have confidence in the actual removal rate. Also, with the installation of the wet SO2 scrubber, a side benefit may be a reduction of mercury emissions; however, this possible reduction won't be determined until project completion and final testing.	Currently, this project is tentatively scheduled to start in 2007 and should be completed by early 2010.	To begin in 2007				
Free Showing of Kilowatt Ours: A Plan to Re-Energize America at USC	A free Showing of Kilowatt Ours: A Plan to Re-Energize America was held at USC on September 13, 2006. Director Jeff Barrie was on hand to lead a discussion after the showing on topics such as mountaintop removal mining, air pollution, global warming, childhood asthma, and mercury contamination.	Completed	September 13, 2006				
Columbia announced as one of four locations for hybrid bus demonstrations	Columbia was announced as one of four cities where a 37-passenger hybrid bus will be demonstrated. The local initiative was brought about by a partnership between USC, the S.C. Research Authority, and the Central Midlands Regional Transit Authority.	It is expected that the hybrid bus will be in operation by the time Columbia hosts the National Hydrogen Association's annual meeting in Spring 2009.	Operational by 2009				
City of Columbia signs Mayor's Climate Protection Agreement	On October 10, 2006, Mayor Bob Coble and the Columbia City Council signed the Mayor's Climate Protection Agreement, joining nearly 300 other cities nationwide who have also signed onto the agreement. By signing the agreement, the city has agreed to undertake methods designed to cut greenhouse emissions such as carbon dioxide and methane by 7 percent by the year 2012. Because of its pledge to reduce global warming and pollution, the South Carolina Chapter of the Sierra Club designated Columbia as a "Cool City."	Completed	October 10, 2006				
City of Columbia unveils eWaste Program	The City of Columbia has announced that beginning December 1, 2006, residents can turn in any electronic device, including unwanted radios, computers, televisions, appliances (except refrigerators), consumer electronics, etc. at a local drop off facility on Colonial Drive for recycling. All electronic devices will then be taken to an Aiken-based company, Global Recovery, to recycle.	Completed	December 1, 2006				
City of Columbia votes to protect two acres of trees	On October 18, 2006, the City of Columbia approved a plan that would allow Dreher High School to build new athletic facilities on a parcel of land near Owens Field Airport. Residents feared that two acres of trees would be lost under the school district's preferred option, however the city approved an option that would reconfigure an existing skateboard park in order to preserve the existing trees.	Completed	October 18, 2006				
City of Columbia initiates Climate Protection Action Committee	As an extension of its commitment to improving air quality, the City of Columbia initiated a Climate Protection Action Committee, commonly referred to as a "green committee." The committee is made up of a citizen's committee, comprised of council appointees, as well as an advisory committee, consisting of local air quality professionals, city staff, Richland and Lexington County EAC contacts, and DHEC representatives. The committee will be divided into several subcommittees, to study topics such as education and outreach, energy conservation, alternative fuels, and land use planning.	The committee will issue recommendations to City Council on ways that the city can reduce air and other types of pollution in early 2007 from the city's 56 buildings and fleet of 100 vehicles. The CPAC will also plan a community-wide summit, scheduled to take place in May 2007. The first CPAC meeting took place on November 30, 2006.	November 30, 2006				
Greater Columbia Fuel Cell Challenge	Six awards, totaling over \$150,000, were given to local organizations to spark the use of fuel cells in the Columbia area during the annual meeting of EngenuitySC. Awards included: • Segway Personal Transport Units for the University of South Carolina • A backup power system at Benedict College • A citizen's school for hydrogen and fuel cell technology • A hands-on exhibit at EdVenture Children's Museum • Portable batteries for television cameras at SC ETV • A first responders extended power pack for law enforcement and emergency officials The fuel cell challenge was project of the USC Columbia Fuel Cell Collaborative, which includes EngenuitySC, the University of South Carolina, the City of Columbia, and the S.C. Research Authority.	To be awarded	2006-2007				
Melting Pot of Columbia unveils fondue-powered vehicle	Jay Kilmartin, owner of a Columbia Restaurant, the Melting Pot, recently purchased and converted an old ambulance to run on used canola oil from the restaurant. The owner purchased the ambulance on eBay.com and converted it from diesel powered to vegetable oil powered. The vehicle now runs on used oils from fondue. The vehicle is painted in the restaurant's color scheme and features The Melting Pot logo and tagline on each side. The owners have been featured locally, as well as on national news and talk shows, such as the Glenn Beck Show. The ambulance has drawn attention to the use of alternative fuels both in the Columbia area, and around the U.S.	Completed	2006				
Emergency Funding for CMRTA System	In early 2006, Richland County Council was informed by the Central Midlands Transportation Authority that their transitional funding would run out at the end of the year, and if funding was not obtained by that time, service would be cut by up to 85% in Richland and Lexington Counties. The CMRTA provides a critical service in the Midlands, having provided approximately 2.6 million trips in FY 05-06.	After weighing several options, Richland County passed an ordinance in October to increase its road maintenance fees by 16 dollars for personal vehicles, and 24 dollars for commercial vehicles. The revenues from these fees, approximately \$7.5 million, will allow the bus system to maintain its current level of service until a permanent funding source is found.	October, 2006				
Richland County Transportation Study Commission	As part of its temporary funding solution to the CMRTA crisis, Richland County Council established a Transportation Study Commission to study public transit, road improvements, and walking and bicycle trails. The commission will study transportation issues that are regional in nature. As a result, members will be made up of appointments from Richland and Lexington County Councils, the City Councils in Columbia, Cayce, and West Columbia.	The 33 member commission is expected to release a final report in Spring 2008, as well as a recommendation for funding high-priority transportation projects.	2006-2008				
Automated vehicle location and tracking system	Richland County recently unveiled an Automated Vehicle Location system, which was highlighted in a recent article in the State newspaper. The system, resulting from a collaboration between the Fleet Manager, IT and GIS staff, will allow the county to track and monitor vehicles in the county fleet at any point in time. The system has safety, management, and air quality applications. Specifically, staff can track and monitor data obtained electronically to see if drivers are using the most economical routes on routine projects, thus reducing fuel costs and emissions from county vehicles.	Completed	2006				
Promotion of Arbor Day and related activities	Richland County Council declared November 25th through December 5th Arbor Day Week. Richland County Government staff and officials partnered with the Richland County Public Library, St. Martin de Pores school, the Governor's Office, the City of Columbia, State Forestry Commission, and the Congaree National Park to organize a variety of events. It has been a highly successful week, including a tree planting in honor of Richland County's 1st ever Arbor Day Baby. Organizations comprising the Midlands Arbor Day Committee were Richland County, City of Columbia, SC Budget and Control Board, Columbia Tree and Appearance Commission, Richland County Appearance Commission, Richland County Conservation Commission, Richland County Conservation District, Forestry Commission, USDA-Natural Resource Conservation Service, Congaree Land Trust, and the City of Forest Acres Appearance Commission.	The Midlands Arbor Day Committee hosted several events throughout the week of Saturday, November 25-December 5, 2006 in celebration of Arbor Day, which is Friday, December 1, 2006.	November and December 2006				

Lawnmower exchange survey and planning	As part of our planned lawnmower exchange (scheduled to take place in spring 2007), Richland County, Lexington County, and DHEC jointly crafted and distributed a lawnmower survey in October 2006. The survey went out to employees at each entity, neighborhood leaders, community organizations, and a link was posted on the Richland County website. The survey generated nearly 200 responses. These responses provide the necessary "market research" that will ensure that the event maximizes its success.	Completed	October 2006				
Ozone Action Days	The county received information from SCDHEC forecasting two Ozone Action Days in the summer of 2006 (June 22 and August 2, 2006.) Prior to each day, county staff send out emails to all county employees with the following message (a sample from the June 21 message):The following information was received from the SC Department of Health and Environmental Control: Air Quality Index for Thursday, June 22 ORANGE (104 AQI) - Unhealthy for Sensitive Groups Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion. **OZONE ACTION DAY for Midlands, Upstate and CSRA for Thursday** Monitor readings across the Upstate, Midlands and CSRA on Wednesday afternoon were indicating that very efficient ozone production conditions are currently place. With the overall weather pattern changing very little for Thursday, that is, with high pressure over the area at the surface and aloft, ground-level ozone production should once again be very efficient with the possibility that a monitor or two in the Upstate, Midlands and CSRA could peak in the code ORANGE category. There are many things you can do to limit air pollution on ozone action days and throughout the year. To learn more about ozone, and for For additional information concerning the air quality forecast, please visit the South Carolina Department of Health and Environmental Control.	Completed	Ozone Season 2006				
Northeast Richland Traffic and Road Improvement Meeting	On December 6, 2006, Councilwomen Val Hutchinson and Joyce Dickerson held an informational meeting with residents and leaders from the rapidly growing Northeast area of Richland County. The meeting included a presentation by Norm Whitaker, head of the Central Midlands Council of Governments, regarding the transportation priorities and funding mechanisms for roads in the Northeast. Mr. Whitaker explained the correlation between congestion, growth, and air quality in the Northeast, and informed attendees that that ozone monitor located at Sandhill has the potential to draw the entire two-county region into non-compliance. The committee resolved to meet on a quarterly basis in an effort to centralize the often fractured discussion of transportation needs on this rapidly growing area of the county. Councilwomen Dickerson and Hutchinson also received suggestions from the group as to how Council can better plan for transportation needs in the Northeast, including accelerating an update of the county's comprehensive plan, as well as a comprehensive countywide transportation plan.	Completed	December 6, 2006				
City of Forest Acres Considering Switching to Biodiesel	In September 2006, Forest Acres city administrator, Mark Williams, informed members of city council that he was interested in using B20 biodiesel as an alternative to diesel in the city's fleet of vehicles. The switch is expected to cost approximately \$13,000 initially, however, this would provide the city with a cleaner, renewable, and domestically produced fuel alternative. The city has eighteen vehicles, including trash loaders and recycling trucks. If Forest Acres makes the switch, it would join the city of Columbia (which is experimenting with biodiesel in two trucks, with the possibility of expanding that to about 300 diesel vehicles) and the city of Cayce, which is using biodiesel in 30 vehicles without substantial cost or maintenance issues.	Under Consideration	2006				
Memorandum of Agreement 9/27/04 with SCE&G Wateree	Facility agreed to take permit limits on two coal-fired boilers during the ozone season as their commitment to the EAC process. NOx emissions from any boiler equipped with selective catalytic reduction systems (SCR) are not to exceed 0.15 lbs/MMBtu averaged over a 5-month period.	An MOA was signed with the SCE&G Wateree facility in which the facility agreed to take permit limits on two coal-fired boilers during the ozone season as their commitment to the EAC process. NOx emissions from any boiler equipped with selective catalytic reduction systems are not to exceed .15lbs/MMBtu averaged over a 5-month period. This agreement went into effect on September 27, 2004.	September 27, 2004		Limits to .15 lbs / MMBtu average from SCR equipped boilers during the ozone season		See Comment #6.
Memorandum of Agreement 8/12/04 with International Paper	Facility agreed to take an annual allowable NOx emission reduction of 1,000 tons at the Eastover Mill Facility. The Title V permit (#1900-0046) for the Eastover Mill provides for allowable NOx emissions totaling 5,155 tons per year. The facility-wide annual allowable NOx emission reduction will reduce allowable NOx emissions at the Eastover Mill from 5,155 to 4,155 tons per year.	The Eastover facility has utilized the "best available control technology" on all of their NOx and VOC emission units at the time of initial installation, and subsequently as part of any significant modification. The power boilers at the Eastover Mill produce low NOx emission levels because of both their design (e.g. tangential firing) and fuel type (e.g. waste wood). One power boiler at the Eastover Mill is covered under the "NOx SIP" and is expected to have emission levels well below their current allocation. An MOA was signed with International Paper in which the facility agreed to take an annual allowable NOx emission reduction of 1,000 tons at the Eastover Mill facility. The Title V permit for the Eastover Mill provides for allowable NOx emissions totaling 5,155 tons/year. The facility-wide annual allowable NOx reduction will reduce allowable NOx emissions at the Eastover Mill from 5,155 to 4,155 tons/year. This agreement went into effect on August 12, 2004.	August 12, 2004		1,000 tons allowable NOx limit		See Comment #6.
Biodiesel Buses at the University of South Carolina	The University of South Carolina, located in Richland County, has begun using 80/20 biodiesel to fuel several of its shuttle buses. The program began with a grant from the DOE to offset the marginal cost of biodiesel fuel, and benefitted from the long-term loan of a tank from United Energy.	The University of South Carolina, located in Richland County, has begun using 80/20 biodiesel to fuel several of its shuttle buses. The program began in 2002 with a grant from the DOE to offset the marginal cost of biodiesel fuel, and benefitted from the long-term loan of a tank from United Energy. DHEC estimates that this program will result in a reduction of 12 lbs of VOC's per year, 25 lbs of NOx per year, and 34 lbs of CO per year.	completed	25 lbs/ year	12 lbs/ year	CO reductions 34 lbs/year December 2004 EAC SIP - Appendix 16 See Comment #6	See Comment #6.
University of South Carolina Ethanol Project	The University of South Carolina, located in Richland County, has begun replacing regular gasoline vehicles with alternative, flexible-fuel vehicles, and has installed E85 infrastructure to supply those vehicles. (Other smaller gasoline-powered vehicles have been replaced with electric vehicles.)	The University of South Carolina, located in Richland County, has begun replacing regular gasoline vehicles with alternative, flexible-fuel vehicles, and has installed E85 infrastructure to supply those vehicles. (Other smaller gasoline-powered vehicles have been replaced with electric vehicles.) DHEC estimates that this program will result in a reduction of 18.9 lbs of VOC's per year, 18.3 lbs of NOx per year, and 1250 lbs of CO.	completed	18.3 lbs/ year	18.9 lbs/ year	CO reductions 1250 lbs/year December 2004 EAC SIP - Appendix 16 See Comment #6	See Comment #6.
SCDHEC flex fuel vehicles.	SCDHEC has a number of flex fuel vehicles that run almost exclusively on E85. SCDHEC uses approximately 23,500 gallons of E85 annually. Not all of the reduction in travel occurred in Richland County.	The use of flex-fuel vehicles has resulted in the displacement of approximately 23,500 gallons of gasoline annually. ** DHEC estimates that this program will result in a reduction of 104 lbs/yr of VOC's, and 103 lbs/yr of NOx and 6,030 lbs/yr of CO.		104 lbs/yr	103 lbs/yr		CO reductions 6030 lbs/year December 2004 EAC SIP - Appendix 16 See Comment 6

Take a Break from the Exhaust program, SCDHEC	Employees participate by choosing pollution-reducing alternatives to commuting alone to work during the ozone season from May 1 - September 30. Emissions are calculated for vehicle miles eliminated. Not all of the reduction in travel occurred within Richland County.	"Take a Break from the Exhaust" runs during the ozone season and reduces the number of miles traveled in Richland County. ** DHEC estimates that these programs will result in a reduction of 568 lbs of VOC's per ground level ozone season, 393 lbs of NOx per ground level ozone season and 5,494 lbs of CO per ground level ozone season.		568 lbs/ ozone season	393 lbs/ozone season		CO reductions 5,494 lbs/year December 2004 EAC SIP - Appendix 16 See Comment #6
Public Ethanol (E85) refueling station	1. On October 6, 2004, the county's first publicly accessible E85 refueling station in downtown was opened. Estimated annual reduction based on first 64 days. 2. Richland County is considering reapplying for ethanol fueling sites from DHEC.	3. There are currently eight E85 stations in the midlands area, including 6 in Richland County, 2 in Lexington County.	October 6, 2004	1. 162 lbs	1. 621 lbs.		1. CO reductions 2,369 lbs/year December 2004 EAC SIP - Appendix 16 See Comments #4, #6
"Smart Ride"	County employees and visitors to Richland County from the Camden, Sumter, and Newberry/Chapin areas are encouraged to ride SmartRide, a park and ride service offered by SCDOT.	SmartRide is a park and ride service offered by SC Department of Transportation, and offers service between Columbia and outlying Camden, Sumter and Newberry. County employees and visitors to Richland County from the Camden, Sumter, and Newberry/Chapin areas are encouraged to ride SmartRide.	SmartRide began in Fall 2003 and continues today	153 lbs.	207 lbs.		CO reductions 3,166 lbs/year December 2004 EAC SIP - Appendix 16 See Comment 6
South Carolina Department of Education	The benefits from these South Carolina Department of Education (SDE) funding sources will be distributed throughout the state. The SDE has agreed to make York County and the five deferred areas the top priority in assigning new and retrofitted buses to service. SDE is also partnering with private companies and local school districts to provide specific funding for school bus retrofits and clean air programs.	The Department of Education has been awarded a Clean School Bus USA Grant for \$499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot. State Education Superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly \$36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles.	2006				
Lawnmower Exchange Event	Working with Lexington County, DHEC, and other sponsors, Richland County is currently planning a lawnmower exchange event to be held in the Spring of 2006. During the event, citizens will be able to turn in an old gasoline-powered engine in exchange for a discount on a new, electrically-powered lawnmower. This event will be the first held in the State of South Carolina.	To be held in the Summer of 2006.	To be completed in Summer 2006	TBD	TBD		
Kerosene Container Exchange Event	Working with Lexington County, DHEC, and other sponsors, Richland County is currently planning a kerosene container exchange event to be held in 2006.	Currently planning for 2006-07 exchange.	To be completed in 2006-07	TBD	TBD		
Promote Bicycling and Pedestrian Strategies as an Alternative to Driving	Columbia Cycle Summit	A Columbia Cycle Summit was held on Friday May 12, 2006 at EdVenture in Columbia. Andy Clarke, Executive Director of the League of American Bicyclists, was the keynote speaker. The workshop's goal was to develop an action plan for the city in order for Columbia to be designated as a bicycle friendly community by the league.	Completed	NA	NA		
	Bicycle and pedestrian Pathways Plan	On May 13, 2006, the Central Midlands Council of Governments unveiled a proposal, known as the Bicycle and Pedestrian Pathways Plan, which calls for 26 cycling projects to be completed in and around the City of Columbia in the next two years. Included in the plan are new bike lanes on area roads, as well as new lanes on an abandoned rail line.	Proposal Completed, implementation is pending funding.	NA	NA		
	Broadcast of "Bicycle/Pedestrian Planning Strategies" at USC	The USC Prevention Research Center and the SC Department of Transportation invite held a live broadcast of "Bicycle/Pedestrian Planning Strategies: From SAFETEA-LU to Safe Routes to School" on May 4, 2006, from 1:00 to 4:00 pm, EDT, at the Moore School of Business.	Completed	NA	NA		
Expand E-Government	Richland County has greatly expanded its e-government options. Using e-government to allow citizens to make tax payments, download forms, view maps, and have their questions answered will allow for fewer trips to the county administration building.	Online tax payments, online business license payments, online forms database, online GIS mapping application.	Completed, with continuing upgrades.	NA	NA		
Santee Cooper's Green Power Generating Station	Santee Cooper's third "green power" generating station began operation in Richland County on April 6, 2006. The \$8.5 million facility is located at Waste Management's Richland County landfill near Elgin. Methane gas produced by decomposing waste at the 124-acre landfill fuels a 5.5-megawatt gas-turbine generator.	The voluntary "green power" program is offered to residential customers in blocks of 100-kilowatt-hours each. Because it costs more to produce "green power" than by conventional means, a \$3 premium is charged on a customer's monthly electric bill.	Completed	NA	NA		
School Bus Retrofit Project (SCDOE)	Approximately 21 diesel buses will be retrofitted with particulate filters during 2006. (South Carolina Department of Education. Additional reductions of PM are also expected)	The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the retrofitting technology being applied works best with this new fuel type. The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at retail stations beginning summer 2006.	2006	357 lbs/year	n/a		CO reductions 2,499 lbs/year December 2004 EAC SIP - Appendix 16 See Comment #6

<p align="center">DECEMBER 2006 RICHLAND COUNTY</p> <p align="center">Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the Counties of Richland and Lexington, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.</p>							
EARLY ACTION COMPACT EMISSION REDUCTION STRATEGIES							
1. Assign a County Air Quality Contact (Also measure 15)	The County Administrator has assigned a staff person to be responsible for all air quality education and outreach activities, and to insure dissemination of the ozone forecast.	Current Air Quality Contact: Joe Cronin, Research Manager	March 1, 2003	NA	NA	.25 FTE	See Comment #2 and #6
2. Gas Can Exchange Events	1. Events held on June 5 and October 16, 2004.	completed	June 5 and October 16, 2004	475 lbs/year			See comment #4, #6
3. Support SCDHEC's statewide efforts to reduce ozone levels	Richland County will offer support to DHEC for statewide emission reduction efforts such as restrictions on open burning, and BACT.	December 2004 EAC SIP did include Appendix 16 - 1. SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year - reductions expected during the ozone season for residential construction waste. 2. SC61-62.5, Std. 5.2 "Control of Oxides of Nitrogen" reduction amount for both existing and new sources combined across Lexington and Richland counties for 2007 calendar year.	1. June 25, 2004 2. June 25, 2004	54.16 tons/season NA	11.40 tons/season 183.5 tons/yr		See comment #2 and #6
4. Promote Land Use Planning	Through Richland County's new Land Development Code, the county has altered its zoning regulations, design controls, and "green development" practices in an effort to promote smart, sustainable growth, which will aid in improving air quality throughout the county and region. Updates to the code are designed to address the following areas: 1. To provide for adequate light, air, and open space; 2. To prevent the overcrowding of land to avoid undue concentration of population and to lessen congestion in the roads; 3. To facilitate the creation of a convenient, attractive, and harmonious community; 4. To protect and preserve scenic, historic, cultural, or ecologically sensitive areas; 5. To regulate the density and distribution of populations and the uses of buildings, structures and land for trade, industry, residence, recreation, agriculture, forestry, conservation, airports and approaches thereto, water supply, sanitation, protection against floods, public activities and other purposes; 6. To facilitate the adequate provision or availability of transportation, police and fire protection, water, sewage, schools, parks and other recreational facilities, affordable housing, disaster evacuation, and other public services and requirements as are set forth in this chapter; 7. To secure safety from fire, flood, and other dangers; 8. To encourage the development of an economically sound and stable county; 9. To assure the timely provision of required roads, utilities, and other facilities and service to new land developments; 10. To assure the adequate provision of safe and convenient traffic access and circulation, both vehicular and pedestrian, in and through new land developments; 11. To assure the provision of needed public open spaces and building sites in new land developments through the dedication or reservation of land for recreational, educational, and/or transportation purposes; 12. To assure, in general, the wise and timely development of new areas, and redevelopment of previously developed areas in harmony with the comprehensive plans of Richland County and its municipalities; 13. To assure compatibility between neighboring properties and adjacent zoning districts; and 14. To further the public welfare in any other regard specified by the Richland County Council.	The new Land Development Code went into effect on July 1, 2005.	July 1, 2005	NA	NA		The County's new Land Development Code is available online at: http://www.rcgov.us/information/town/LandDevelopmentCode110904.pdf
5. Join and participate in the SC Early Action Plan for 8-hour ozone.	Given its non-attainment status under the new 8-hour ozone standard, Richland County is actively participating in the South Carolina Early Action Program in an effort to promote cleaner air sooner through the implementation of various emission reduction strategies.	The county remains committed to the EAP and the emission reduction strategies listed below. Preliminary data shows that for the first time since the new federal standard went into effect, the three-year average of fourth highest ozone concentrations at each of the three ozone monitors located in Richland County now meet the tougher standard.	County Council agreed to participate in December 2002. The process continues until 2007.	NA	NA		See Comment #2 and #6
6. Industry Advisory Panel	Richland County seeks to create a forum by which local industries can communicate new ideas, and inform each other of the strides each has made in ozone reduction. This panel will focus on industries emitting the highest amounts of VOCs and NOx, but all Richland County industries and other interested parties will be invited to participate. Form a group representing stationary NOx sources in the county to share best practices, share technical resources in the county and pursue targeted NOx reductions. This group could review emission inventories and modeling data to identify stationary sources with significant impact on ozone air quality. This group could also share best practices for NOx control technology and technical/engineering resources and encourage NOx reductions to support ozone attainment.	Attempts to assemble an advisory panel have been met with little interest.	This initiative is currently on hold pending further interest.				
7. Replace gasoline golf carts with electric carts	Richland County has researched the possibility of purchasing electric golf carts for county fleet. The County currently has 4 golf carts, all of which use gasoline. Electric carts are lower maintenance and lower cost, and parts are also easier to get, thus providing more of an incentive to purchase electric carts in the future.	There are currently no plans to replace existing gasoline golf carts with electric. As carts are replaced as needed, electric carts will be preferred over gasoline if practicable.	Emphasis place the next time a golf cart is purchased.	NA	NA		See Comment #2 and #6
8. Assist with establishing alternative fuels for public fleets.	Under an administrative policy, Richland County has a goal of replacing 30% of its fleet by 2010 with the lowest emission vehicles practical. Under this policy, the county continues to pursue flexible fuel, alternative fuel, and hybrid vehicles for its fleet. Flexible and Alternative Fuel Vehicles 1. The county has purchased approximately two dozen flexible fuel (E85/Gasoline) vehicles for its public fleet. More flexible fuel vehicles will be purchased in future years as funding and availability under the state contract permits. 2. The Central Midlands Regional Transportation Authority (CMRTA) has 7 compressed natural gas (CNG) buses in its fleet, with the remaining vehicles operated by the "clean diesel" technology. CMRTA used 60,031 gallons of CNG during 2004. 3. County staff, in conjunction with DHEC and the Palmetto State Clean Fuels Coalition, continues to research and consider the possibility of using other alternative fuels, such as biodiesel. To become more familiar with available alternatives to gasoline, staff has attended all Clean Cities meetings, along with special events, such as the coalition's Biofuels Showcase, held in Columbia on November 18, 2005 4. The county, in conjunction with DHEC, continues to pursue grant funds to convert existing vehicles to alternative fuel, to purchase new alternative fuel vehicles, and to install the needed infrastructure to service alternative fuel vehicles. a. CNG Vehicles Grant Application b. Diesel Retrofit Grant Application c. E85 Fueling Infrastructure Grant Application	2004 (Unfunded) 2004 (Unfunded) 2005 (Unfunded)	Unfunded Unfunded Unfunded	NA NA NA	NA NA NA		See Comment #2 and #8

	Hybrid Vehicles 1. Staff has researched the practicality of replacing traditional fleet vehicles with hybrid vehicles. 2. For the first time, the state contract has included a Chevrolet 1500 hybrid pickup truck. The county's fleet manager and other members of staff met with the vendor on December 13, 2005 to test drive and learn more about the vehicle. To date, the county has purchased 8 of these hybrid vehicles, each of which will receive approximately 12% better fuel efficiency, and release 1600 fewer pounds of emissions into the air each year than the traditional pickup.	Purchases expected in FY 2005-06	Completed Completed April 2006	NA 1600 lbs less total emissions per vehicle per year.		
9. Implement a program to foster ozone awareness and to educate and motivate individuals to take actions to minimize ozone pollution.	Richland County is committed to promoting ozone awareness, both internally and externally. By using the measures listed below, the County has sought to educate residents about the harmful effects of ozone, and the everyday steps they can take to improve air quality and reduce ozone in Richland County.					See Comments #2 #6 and #8 for additional information.
	1. Place SCDHEC's Daily Air Quality Index on the County Website.	A link appears on the County's main page, www.rcgov.us. DHEC updates the index on a daily basis during the ozone season.	Began Spring 2005	NA	NA	
	2. Place air quality related informational and educational items on the County's website.	A link appears on the County's main page for information on the Ozone EAP, http://www.rcgov.us/information/ozone/home.asp. The page includes information about the County's plan, progress reports, links to informational websites, and electronic versions of educational fliers and brochures.	Completed, replacing materials as needed	NA	NA	
	3. Issue press releases and promote news coverage of the county's ozone-related events and initiatives.	The Ozone Coordinator, working in conjunction with the Public Information Office, frequently issues press releases and offers media interviews to promote ozone awareness and to highlight county initiatives.	Completed, with continuing releases as needed	NA	NA	
	4. Actively participate in Ozone Awareness Week	The county actively participated in Ozone Awareness Week.	Completed March 28, through April 1, 2005	NA	NA	
	5. Place informational posters in the County Administration Building.	Informational posters appear in the lobby of the building, directly across from the Treasurer's Office, where residents come to pay vehicle and other taxes.	Placed in the lobby in Spring 2005 and remains there indefinitely.	NA	NA	
	6. Place informational brochures and fliers in the County Administration Building.	Informational brochures and fliers appear in the lobby of the building. The supply is restocked as needed.	Completed, replacing materials as needed	NA	NA	
	7. Encourage mass transit and other transportation alternatives.	Employees are encouraged via email to use mass transit by e-mail. A poster is currently being developed to be placed in the lobby to advertise bus service and the SmartRide Program.	Completed, with continuing reminders	NA	NA	
	8. Keep county employees updated on air quality issues by email regularly.	The county's Ozone Coordinator frequently e-mails county staff regarding air quality issues. E-mails in 2005 included updates on forecasted ozone action days, information on the availability of E85 and other alternative fuels, a list of things you can do to improve air quality, and car maintenance tips to improve fuel efficiency and lower emissions.	Completed, with continuing reminders	NA	NA	
	9. Actively participate in Earth Day Events	SC DHEC held Earth Day festivities on April 22 at the SC State Museum, located in Richland County. Other events corresponding with the event were held, including an alternative fuels display at Earth Fare, a local health food store.	Completed	NA	NA	
	10. Actively participate in Car Awareness Week	Richland County was a participant in DHEC's Car Care Awareness Week activities. A segment of the county's television show was dedicated to promoting the event, and staff was on hand to assist.	Completed	NA	NA	
	11. Use the county's new television show, Richland Revealed, to promote ozone awareness.	Richland County has entered into an agreement with the local WB station to broadcast Richland Revealed at 11:30 am on Sunday mornings. An episode of the show to be dedicated to air quality is planned for the spring of 2006. This episode will highlight the importance of clean air, and promote steps that can be taken to reduce pollution.	Completed, with continuing updates	NA	NA	
10. Meet with representatives of other metropolitan areas that have implemented programs to learn from experiences.	Frequently survey or work in conjunction with other jurisdictions to discuss initiatives or events that might be adapted for use in Richland County. Actively engaging in Clean Cities, which has stakeholders from other counties, municipalities, and state agencies, as well as the private and non-profit sector. Work with non-profit organizations on air quality and environmental-related issues. Clean Air Report briefing was held for members of Richland County and Columbia City Council 1. The "Clean Air Report for the Columbia Area" was issued by the Southern Environmental Law Center. Staff members regularly interact with SELC staff. 2. Partnership with Keep the Midlands Beautiful and other local organizations on special projects.	Valuable research on hybrid vehicle use and lawnmower exchange projects has been obtained using such collaboration. Staff has obtained a greater understanding of alternative fuels and their implications for cleaner air by attending Clean Cities meetings and events.	Began Spring 2003, with continuing dialogue Completed	NA	NA	See Comments #2 #6 and #8
11. Offer compressed work weeks or flexible schedules to County employees	Many Richland County employees operate on a flex schedule. We hope to expand this program to other departments where feasible (excluding most emergency services employees.) The implementation of compressed work weeks and flex time helps reduce traffic congestion during the peak driving hours by spreading out the number of vehicles on the roadway over a longer period of time.		Completed, with future expansion as needed.	NA	NA	See Comment #2 and #6
12. Encourage carpooling, vanpooling, and mass transit as an alternative to single passenger trips	County employees and visitors to Richland County from the Camden, Sumter, and Newberry/Chapin areas are encouraged to ride SmartRide, a park and ride service offered by SCDOT. County employees and visitors to Richland County are encouraged to use the Central Midlands Regional Transportation Authority's bus system. In 2004, the County Ozone Coordinator undertook a survey of county employees to gauge interest in car-pooling initiatives. With the recent increase in gas prices, the Ozone Coordinator has begun researching new park-and-ride and car-pooling initiatives.	The number of SmartRide riders has increased substantially since its inception. SCDOT now offers free trips on Ozone Action Days. Unfortunately, county employees expressed little interest in car-pooling initiatives. Research has been done as to which zip codes county employees are coming from. A pilot park-and-ride program is expected to begin in Spring 2006. If successful, the program will expand to other areas of the region.	SmartRide began in Fall 2003 and continues today Completed, with continuing reminders Completed Spring 2004 Research was undertaken in Summer 2005. A pilot program may begin with future interest.	NA	NA	See Comment #2 and #6
13. Join and participate in Clean Cities	Richland County signed on as a stakeholder in the Palmetto Clean Fuels Coalition (which is now Clean Cities) on July 22, 2003. The county joined the coalition in an effort to seek ways to increase the availability of alternative fuels in our county, to increase the use of those fuels, and to increase public awareness of the benefits of using alternative fuels. Richland County sends a representative to all Clean Cities meetings.	Richland County remains a stakeholder in this organization, and continues to send a representative to all coalition meetings. With the assistance of the coalition, there are now six service stations that offer E85 to the public in Richland County.	July 22, 2003	NA	NA	See Comment #2 and #6
14. Develop City and County Energy Conservation Plan	Richland County currently promotes internal recycling in the administration building, as well as other county-owned buildings. Recycling bins are placed throughout the building, ranging from white paper to aluminum can receptacles. We remind employees to turn off lights and computers when not in use. Council is currently considering the possibility of hiring an energy conservation consultant to survey county buildings for inefficiencies and to plan for financing any needed upgrades to county facilities.		Completed, with continuing reminders Pending Council action	NA	NA	See Comment #2 and #6

15. Assign Staff to become air quality contact/expert for jurisdiction	The staff member assigned as air quality contact is also the expert for the jurisdiction.	Please see Measure 2, Assign a county air quality contact.	Completed in 2003				
16. Encourage Mass Transite (transportation choices and alternatives)	All Richland County citizens have access to mass transit.	Use of mass transit is specifically encouraged for county, city and state employees. Palmetto Health Richland and Baptist are the first and second largest users of the bus system respectively. Since education and awareness foster ozone awareness and to educate and motivate individuals to take actions to minimize ozone pollution" section g. foster use of public transit, this measure has been included as part of measure 9.	Completed and continuing with reminders.				
17. Encourage not overfilling fuel tank	Stop when the nozzle clicks off.	This information is contained on fliers that are posted throughout county departments. The flier is also online, and available to the public.	Completed in 2003 and continuing				
18. Restrict mowing days and times all year, especially during ozone season / ozone action days. Promote the use of electric and propane lawn mowers.	Per the Richland County Administrator's directive, all mowing and the use of gas-powered lawn equipment on County property should be restricted on Ozone Action Days (orange and above), when manageable. In addition, the County will seek to landscape facilities in ways that reduce equipment use, thereby requiring lower maintenance, and resulting in fewer emissions.		Effective - October 8, 2004	NA	NA		See Comment #2 and #6
19. Consider Tree Planting/landscaping standards.	Planted trees reduce the need for air conditioning, reduce the heat island effect in urban areas, and reduce energy usage. Tree ordinances could be drafted to establish minimum tree planting standards for new development; and to promote strategic tree planting, street trees, and parking lot trees.	Landscaping standards are included in the Land Development Code. Tree ordinances have been drafted to establish minimum tree planting standards for new development, and to promote strategic tree planting, street trees, and parking lot trees. Stringent specifications are laid out in this section along with repercussions for not abiding by these standards. The Land Development Code's proposed implementation date is January 1, 2005. The Planning Commission transmitted its recommended draft of the Land Development Code to the County Council on 12/31/03 and the Landscaping Standards, Section 26-176 on 2/13/04. The New Land Development Code - Effective 7/1/05 - revised 11/9/04 is available online at: http://www.richlandonline.com/information/town/LandDevelopmentCode110904.pdf Landscaping Standards, Section 26-176 is located on pages 254 through 270.	Completed. New Land Development Code effective 7/1/05.				
20. Reduction of VOC emissions and Reduction of NOx Emissions at International Paper Eastover Mill	MOA was signed with International Paper in which the facility agreed to take an annual allowable Nox emission reduction of 1,000 tons at the Eastover Mill facility. The Title V permit for the Eastover Mill provides for allowable NOx emissions totaling 5,155 tons/year. The facility-wide annual allowable NOx reduction will reduce allowable NOx emissions at the Eastover Mill from 5,155 to 4,155 tons/year. (See Comment #6 for specific information regarding reductions.)		August 12, 2004	NA	1,000 tons/year		See information above. See Comment #6 for specific information regarding reductions
21. Reduction of Nox emissions at SCE&G's Wateree Plant	MOA was signed with the SCE&G Wateree facility in which the facility agreed to take permit limits on two coal-fired boilers during the ozone season as their commitment to the EAC process. Nox emissions from any boiler equipped with selective catalytic reduction systems are not to exceed .15lbs/MMBtu averaged over a 5-month period. (See Comment #6 for specific information regarding reductions.)		September 27, 2004	NA	Emission Limit of .15lbs/MMBtu during the ozone season.		See information above. See Comment #6 for specific information regarding reductions
22. Prohibit/limit/ban open burning (all year or May – September or on Ozone Action Days); encourage to mulch clearing debris rather than burning it.	Richland County's Code of Ordinances prohibits all fires within the right-of-way of any street, road, or highway except in certain cases. Open fires may be set in performance of an official duty of any public officer when deemed necessary to protect property, life, or the public welfare. Salamanders or other devices may be used for heating by construction or other workers, provided no nuisance is created. Open burning is prohibited within any "residential" zoning district (with a few exceptions). During a pollution alert declared by duly constituted authority, any and all open burning shall be unlawful.	Codified in Richland County Code of Ordinances, Section 10-1.	Completed, with continuing enforcement	54.16 tons/season	11.4 tons/season		See Richland County Code of Ordinances, Section 10-1, available online at: http://www.amlegal.com/richlandco%5Fsc/
RICHLAND COUNTY AIR QUALITY IMPROVEMENT POLICY - ADMINISTRATOR'S DIRECTIVE							
Air Quality Awareness and Improvement Policy	An Administrative Directive, issued October 8, 2004, for the purpose of establishing policies by which air quality and awareness will be improved via recurring activities of County government. Details of the policy include: 1. Ensure that all employees continue to be notified of upcoming ozone action days. Notification occurs via email. 2. Departments allowed to promote flex-scheduling where feasible. Certain employees in emergency services departments are unable to practice flex-scheduling, but other operational departments are allowed to promote this option where manageable. 3. Richland County has several Tier II compliant vehicles and pieces of equipment currently in its fleet and will increase this number. Richland County had budgeted for 13 alternative fuel vehicles (AFVs) in FY 2004-2005, with an increase in the purchasing of AFVs thereafter. It shall be the goal of the County that by 2010, 30% of the County fleet will be the lowest emission vehicles practical. 4. All County vehicles and equipment are operating according to the manufacturer's specifications, and shall continue to do so. Richland County currently uses recyclable oil filters with an extended service interval capacity, which allows the county to perform oil changes at 4,000 or 5,000 miles instead of 3,000. Richland County seeks to incorporate synthetic oils and fluids in its maintenance program, which offer superior protection and longer service intervals. 5. Drivers are required to eliminate vehicle idling. Exceptions include emergency vehicles, traffic/weather conditions, and vehicles being repaired, maintained, or inspected. These exceptions should occur only as reasonably required for specific operations. 6. Restrict mowing and use of gas-powered lawn equipment on County property on Ozone Action Days (orange and above) where manageable. 7. The County will seek to landscape facilities in ways that reduce equipment use, thereby promoting lower maintenance, resulting in fewer emissions. 8. During a pollution alert, such as an ozone action day, all outdoor burning shall be unlawful. (See Richland County Ordinance Chapter 10, Section 10-1.) 9. Richland County will continue to practice energy conservation in all County facilities. Conservation measures include turning off lights and computers on nights, weekends, and on holidays. Strong emphasis and preference will be placed on purchasing Energy Star compliant products. 10. Recycling efforts shall remain ongoing at County facilities. SEE Comment #6	Ongoing	Effective - October 8, 2004	NA	NA		See comment #6
Comments: 1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documented as a part of the ongoing reporting requirements. 2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings," "advantages/disadvantages," "recommendations," "costs," etc.... 3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp 4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp 5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp 6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas) - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html 7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html 8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp							

Richland County, South Carolina

Local Early Action Compact Measures

Prepared by Joe Cronin

In an effort to keep our contact information updated we have provided the following information for the county:

	Name	Telephone	E-mail Address
County Administrator	Milton Pope	(803)576-2058	miltonpope@richlandonline.com
EAC contact	Joe Cronin	(803)576-2066	joecronin@richlandonline.com

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the County of Richland, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.

1. Assign a county air quality contact

Description of Measure

The Richland County Ozone Coordinator is responsible for all air quality education and outreach activities, and to insure the dissemination of the ozone forecast. The Ozone coordinator also works with SCDHEC and other parties on air quality issues relevant to Richland County.

- The Richland County Administrator assigned a staff person, Ms. Roxanne Matthews, to serve as the Richland County Ozone Coordinator on March 1, 2003.
- Ms. Matthews was replaced in this capacity by Mr. Joseph Cronin on March 15, 2005. Mr. Cronin continues to serve as Ozone Coordinator.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2003 and continuing.

2. Gas can exchange events

- Working with Lexington County, DHEC, and other sponsors, Richland County held two gas can exchange events, on June 5, 2004 and October 16, 2004.
- Over 200 cans were exchanged during the June and October events.

Estimate of Emission Reductions (if available)

DHEC estimates that these exchanges will result in a reduction of 475 lbs of VOC's per year. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2004.

3. Support state-wide emission reduction efforts

Description of Measure

Richland County has offered support to DHEC for statewide emission reduction efforts such as restrictions on open burning and BACT.

1. SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year - reductions expected during the ozone season for residential construction waste. DHEC estimates that this will result in a reduction of 54.16 tons of VOC's per season, and 11.4 tons of NOx per season.
2. SC61-62.5, Std. 5.2 "Control of Oxides of Nitrogen" reduction amount for both existing and new sources combined across Lexington and Richland counties for 2007 calendar year. DHEC estimates that this will result in a reduction of 183.5 tons of NOx per season.

Estimate of Emission Reductions (if available)

See information above. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed on June 25, 2004 with continuing restrictions.

4. Promote land-use planning

Description of Measure

Intentionally altering the urban environment to improve air quality. Examples are transit oriented development, infill development, and pedestrian oriented development, concentrated activity centers, strengthening downtowns, balancing location of housing and employment opportunities. Can include policies, programs or actions such as zoning regulations, design controls, "green development" practices, and incentive programs to encourage smart growth.

Through Richland County's new Land Development Code, the county has altered its zoning regulations, design controls, and "green development" practices in an effort to promote smart, sustainable growth, which will aid in improving air quality throughout the county and region. Updates to the code are designed to address the following areas:

1. To provide for adequate light, air, and open space;
2. To prevent the overcrowding of land to avoid undue concentration of population and to lessen congestion in the roads;
3. To facilitate the creation of a convenient, attractive, and harmonious community;
4. To protect and preserve scenic, historic, cultural, or ecologically sensitive areas;
5. To regulate the density and distribution of populations and the uses of buildings, structures and land for trade, industry, residence, recreation, agriculture, forestry, conservation, airports and approaches thereto, water supply, sanitation, protection against floods, public activities and other purposes;
6. To facilitate the adequate provision or availability of transportation, police and fire protection, water, sewage, schools, parks and other recreational facilities, affordable housing, disaster evacuation, and other public services and requirements as are set forth in this chapter;
7. To secure safety from fire, flood, and other dangers;
8. To encourage the development of an economically sound and stable county;
9. To assure the timely provision of required roads, utilities, and other facilities and service to new land developments;
10. To assure the adequate provision of safe and convenient traffic access and circulation, both vehicular and pedestrian, in and through new land developments;
11. To assure the provision of needed public open spaces and building sites in new land developments through the dedication or reservation of land for recreational, educational, and/or transportation purposes;
12. To assure, in general, the wise and timely development of new areas, and redevelopment of previously developed areas in harmony with the comprehensive plans of Richland County and its municipalities;
13. To assure compatibility between neighboring properties and adjacent zoning districts; and
14. To further the public welfare in any other regard specified by the Richland County Council.

- Among its many purposes, the LDC specifies planning requirements that seek to “lessen congestion in the roads.” For the first time, site plans for major land development must include a traffic management plan: “An evaluation of the effect of traffic generated by a development on the operation and safety of the adjacent public roads. Such analysis shall include an identification of traffic impact mitigation measures needed to improve the safety, operation, and flow of vehicular and pedestrian movement into and out of the development.”
- Richland County Council sponsored a neighborhood meeting on April 16, 2005, to share information on planning, design, and development of livable communities. Dr. Chuck Bohl, an internationally recognized expert on this topic is scheduled to speak.
- Richland County has contracted with the Palmetto Conservation Foundation (PCF) to address how land use, transportation, parks, and trails can be incorporated into a greenway network that builds on the Three Rivers Greenway and Palmetto Trail and promote integrating physical activity into daily routines. The primary activities of focus are bicycle/pedestrian transportation, safe routes to school, and community planning. In combination with Bicycle/Pedestrian planning now underway at the Columbia Metropolitan Planning Organization, car commuters will have additional commuter options. PCF has already participated in a successful active living campaign in Spartanburg, South Carolina, which brings, in part, an air quality benefit that Columbia and Richland County want to emulate.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed. Richland County’s new land development code went into effect on July 1, 2005.

5. Join and participate in Clean Cities

Description of Measure

The county joined the coalition in an effort to seek ways to increase the availability of alternative fuels in our county, to increase the use of those fuels, and to increase public awareness of the benefits of using alternative fuels.

- Richland County signed on as a stakeholder in the Palmetto Clean Fuels Coalition (which is now Clean Cities) on July 22, 2003.
- Richland County sends a representative to all Clean Cities meetings, including the most recent meeting on March 23, 2003.
- With the assistance of the coalition, there are now six service stations that offer E85 to the public in Richland County.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2003 and continuing.

6. Industry Advisory Panel

Description of Measure

Richland County seeks to create a forum by which local industries can communicate new ideas, and inform each other of the strides each has made in ozone reduction. This panel will focus on industries emitting the highest amounts of VOCs and NOx, but all Richland County industries and other interested parties will be invited to participate. Form a group representing stationary NOx sources in the county to share best practices, share technical resources in the county and pursue targeted NOx reductions. This group could review emission inventories and modeling data to identify stationary sources with significant impact on ozone air quality. This group could also share best practices for NOx control technology and technical/engineering resources and encourage NOx reductions to support ozone attainment.

- Attempts to assemble an advisory panel have been met with little interest to date.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

This initiative is currently on hold pending further interest.

The county has expressed interest in working with DHEC and neighboring counties/municipalities to develop strategies to engage local industries in air quality issues.

7. Replace gasoline golf carts with electric cars

Description of Measure

Richland County has researched the possibility of purchasing electric golf carts for county fleet. The County currently has 4 golf carts, all of which use gasoline. Electric carts are lower maintenance and lower cost, and parts are also easier to obtain, thus providing more of an incentive to purchase electric carts in the future.

- There are currently no plans to replace existing gasoline golf carts with electric. However, as carts in the county fleet are replaced, electric carts will be preferred over gasoline, if practicable.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Pending the replacement of golf carts, as needed.

8. Assist with establishing alternative fuels for public fleets.

Description of Measure

Fuels other than gasoline and diesel that are used to power on-road vehicles. Examples of alternative fuels include bio-diesel, electricity, ethanol, liquefied petroleum gas, methanol and natural gas.

On October 13, 2004, Richland County Government published an ambitious administrative directive to increase the purchase of alternative fuel vehicles, the purpose being to significantly improve air quality in the region and to decrease County dependence on the less desirable petroleum. Conversion of the current fleet of 400 vehicles (excludes emergency and heavy-duty) has begun with the budgeting of twenty-four alternative fuel vehicles in FY2006. By purchasing at this level each year for five years, the County will reach the goal of 120 AFVs (30%) by the year 2010.

Administration has also issued a policy directive requiring all vehicle purchases to be approved by the County Fleet Manager. By staying current on available AFV models, the County will make better decisions on vehicle orders, insuring maximum participation in this directive. Under this policy, the county continues to pursue flexible fuel, alternative fuel, and hybrid vehicles for its fleet.

a. Purchase Flexible and Alternative Fuel Vehicles

The county has purchased approximately two dozen flexible fuel (E85/Gasoline) vehicles for its public fleet. More flexible fuel vehicles will be purchased in future years as funding and availability under the state contract permits.

There were 1,815 gallons of biodiesel purchased and 38,020 gallons of ethanol purchased in 2004 in Richland County. There are approximately 745 alternative fuel vehicles operating within federal, state, county, and municipal government.

Status: Approximately two dozen purchased to date. Future purchases are planned.

b. CNG Buses for CMRTA

The Central Midlands Regional Transportation Authority (CMRTA) has 7 compressed natural gas (CNG) buses in its fleet, with the remaining vehicles operated by the "clean diesel" technology. CMRTA used 60,031 gallons of CNG during 2004.

Status: Completed.

c. Ongoing research into new cleaner and alternative fuels

County staff, in conjunction with DHEC and the Palmetto State Clean Fuels Coalition, continues to research and consider the possibility of using other alternative fuels, such as biodiesel and hydrogen.

Staff has attended meetings and special events regarding cleaner and alternative fuels, including:

- **Clean Cities Meetings**
- **Biofuels Showcase held in Columbia on November 18, 2005 (Columbia)**
- **Fuel Cell South 2006 Hydrogen Conference, April 24 – 26, 2006 (Columbia)**

On April 13, 2005, there was a grand opening of 2 ethanol-refueling stations within the Richland County available to the public. There were two constructed in 2004. The opening of these stations was made possible by efforts of the Palmetto States Clean Fuel Coalition and its local members.

Status: Completed. Staff will continue to attend and participate in upcoming alternative fuel events.

d. Pursue grant opportunities for alternative fuel infrastructure and equipment

The county, in conjunction with DHEC, continues to pursue grant funds to convert existing vehicles to alternative fuel, to purchase new alternative fuel vehicles, and to install the needed infrastructure to service alternative fuel vehicles.

1. CNG Vehicles Grant Application

Status: Applied in 2004, Unfunded.

2. Diesel Retrofit Grant Application

Status: Applied in 2004, Unfunded.

3. E85 Fueling Infrastructure Grant Application

Status: Applied in 2005, Unfunded.

e. Purchase Hybrid Vehicles

The county took delivery of eight hybrid pick up trucks in March and April of 2006. These are the first hybrid vehicles in the County's fleet. The trucks have 12% better fuel economy and release 1600 fewer pounds of emissions each year

than similar non-hybrid models. The trucks also have several outlets which allow county staff to run electrical equipment off the battery of the vehicle, rather than a gasoline powered generator.

Status: Completed.

- The Governor signed Hybrid vehicle bill H4312 on June 1, 2006. Act 312, R371, H4312 Bill may be viewed at http://www.scstatehouse.net/sess116_2005-2006/bills/4312.htm and its caption reads: An act to amend the Code of Laws of South Carolina, 1976, by adding Section 12-6-3377 so as to allow a state income tax credit equal to twenty percent of certain new hybrid, fuel cell, alternative fuel, or lean burn technology motor vehicle. Credits allowed against a taxpayer's federal income tax liability.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2004 and continuing

9. Implement a program to educate and motivate individuals to take actions to minimize ozone pollution.

Description of Measure

Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.) Aims to foster ozone awareness and to educate and motivate individuals to take actions to minimize ozone pollution

Richland County is committed to promoting ozone awareness, both internally and externally. By using the measures listed below, the County has sought to educate residents about the harmful effects of ozone, and the everyday steps they can take to improve air quality and reduce ozone in Richland County.

a. Place SCDHEC's Daily Air Quality Index on the County Website

Since May 2005, a link has appeared on the County's main page, www.rcgov.us, directing visitor's to DHEC's daily air quality report. DHEC updates the index on a daily basis during the ozone season.

Status: Completed

b. Place air quality related informational and educational items on the County's website

A link appears on the County's main page for information on the Ozone EAP, <http://www.rcgov.us/information/ozone/home.asp>. The page includes information about the County's plan, progress reports, links to informational websites, and electronic versions of educational fliers and brochures.

Status: Completed

c. Have a plan in place to issue press releases and promote news coverage of the county's ozone-related events and initiatives

The Ozone Coordinator, working in conjunction with the Public Information Office, frequently issues press releases and offers media interviews to promote ozone awareness and to highlight county initiatives.

Status: Completed. Press releases are released on a regular basis.

d. Actively participate in Ozone Awareness Week

The county actively participated in Ozone Awareness Week during the week of

March 28 – April 1, 2005.

Status: Completed

e. Place informational posters in the County Administration Building

Informational (“Good Up High, Bad Nearby”) posters appear in the lobby of the building, directly across from the Treasurer's Office, where residents come to pay vehicle and other taxes. The posters were put up in Spring 2005 and remain.

Status: Completed.

f. Place informational brochures and fliers in the County Administration Building

Informational brochures and fliers appear in the lobby of the building. The supply is restocked as needed.

Status: Completed.

g. Encourage mass transit and other transportation alternatives

Employees are encouraged via email to use mass transit, especially prior to forecasted ozone awareness days. A poster is currently being developed to be placed in the lobby to advertise bus service and the SmartRide Program.

Status: Completed, with continuing updates and promotion.

h. Keep county employees updated on air quality issues by email regularly

The county's Ozone Coordinator frequently e-mails county staff regarding air quality issues. E-mails in 2005 included updates on forecasted ozone action days, information on the availability of E85 and other alternative fuels, a list of things you can do to improve air quality, and car maintenance tips to improve fuel efficiency and lower emissions.

Status: Completed, with continuing updates.

i. Use the county's new television show, Richland Revealed, to promote ozone awareness

Richland County has entered into an agreement with the local WB station to broadcast Richland Revealed at 11:30 am on Sunday mornings. An episode of the show to be dedicated to car care and air quality awareness was aired during the spring of 2006 in conjunction with Car Care Awareness Week.

Status: Completed.

j. Actively participate in Car Care Awareness Week

Richland County was a participant in DHEC's Car Care Awareness Week activities. A segment of the county's television show was dedicated to promoting the event, and staff was on hand to assist.

Status: Completed.

k. Actively participate in Earth Day Events

SC DHEC held Earth Day festivities on April 22 at the SC State Museum, located in Richland County. Other events corresponding with the event were held, including an alternative fuels display at Earth Fare, a local health food store.

Status: Completed.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2005 and continuing.

10. Meet with representatives of other metropolitan areas that have implemented programs to learn from experiences.

Description of Measure

Engage other governmental entities and organizations to share ideas and build knowledge of air quality issues. Determine feasibility of replicating successful programs or components in local areas.

Richland County is committed to learning from and sharing ideas with other governments and organizations in order to build knowledge of air quality issues. Such actions have included:

a. Survey on government hybrid vehicle use and performance (nationwide)

The county Ozone Coordinator undertook a nationwide survey by e-mail of government agencies using hybrid vehicles. Survey results, in conjunction with economic and environmental incentives, influenced the county's decision to purchase eight hybrid vehicles in the current fiscal year.

Status: Completed.

b. Research of lawnmower exchange programs (nationwide)

The county Ozone Coordinator, working in conjunction with DHEC and the Ozone Coordinator in neighboring Lexington County, has researched previous lawnmower exchange programs that have occurred in other parts of the country. Results from this contact has assisted the three agencies in planning a lawnmower exchange event to be held in 2006.

Status: Completed.

c. Participation in Clean Cities, which has stakeholders from other counties, municipalities and state agencies, as well as representatives from the private and non-profit sector.

Richland County joined Clean Cities in July 2003, and sends a member of staff to all Clean Cities meetings.

Status: Completed, Staff will continue to attend stakeholder meetings.

d. Work with non-profit organization and environmental groups on air quality-related issues.

Richland County has established working relationships and lines of communication with environmental organizations such as:

1. **The Southern Environmental Law Center**, which published a “Clean Air Report for the Columbia Area” on June 6, 2005.
2. **Keep the Midlands Beautiful and other local organizations**, who assist in air quality outreach and participate in local events, such as the gas can exchange events.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2003 and continuing.

11. Use compressed work weeks or flexible work hours

Description of Measure

Offer compressed work weeks or flexible schedules to county employees. The implementation of compressed work weeks and flex time helps reduce traffic congestion during the peak driving hours by spreading out the number of vehicles on the roadway over a longer period of time.

a. Flex Scheduling

Richland County has implemented flex scheduling, and many Richland County employees operate on flex schedules. We hope to expand this program to other departments where feasible (excluding most emergency services employees.)

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2004 and continuing. To be expanded as feasible.

12. Encourage carpooling, vanpooling as an option where employees living in the same area agree to ride to work together rather than to drive their individual vehicles to work.

Description of Measure

Encourage carpooling whenever possible and also encourage mass transit as an alternative to single passenger trips

a. SmartRide

SmartRide is a park and ride service offered by SC Department of Transportation, and offers service between Columbia and outlying Camden, Sumter and Newberry. County employees and visitors to Richland County from the Camden, Sumter, and Newberry/Chapin areas are encouraged to ride SmartRide.

Status: Completed, with continued promotion. The service, provided by the SCDOT, remains available.

b. CMRTA Bus Service

County employees and visitors to Richland County are encouraged to use the Central Midlands Regional Transportation Authority's bus system, with service in Columbia and surrounding areas. The system serves more than 40,000 passengers each week.

In 2005, the CMRTA was named the most improved public transportation system in South Carolina.

Status: Completed, with continued promotion.

c. Car-Pooling

In 2004, the County Ozone Coordinator undertook a survey of county employees to gauge interest in car-pooling initiatives. Unfortunately, county employees expressed little interest in car-pooling initiatives.

Following the recent increase in gas prices, the Ozone Coordinator began researching new park-and-ride and car-pooling initiatives. Research has been done as to which zip codes county employees are coming from. In upcoming months, a survey will be again be administered to county employees to see if there is more interest in car-pooling and park-and-ride. If there is sufficient interest, a pilot park-and-ride program is expected to begin. If successful, the program will expand to other areas of the region.

Status: Employee car-pooling initiatives have not yet been initiated due to low interest. However, staff will continue to gauge interest in car-pooling and park-and-ride.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2004 and continuing.

13. Local government joins and participates in the SC Early Action Plan for 8-hour Ozone.

Description of Measure

Join and participate in the SC Early Action Plan for 8-hour Ozone. Given its non-attainment status under the new 8-hour ozone standard, Richland County is actively participating in the South Carolina Early Action Program in an effort to promote cleaner air sooner through the implementation of various emission reduction strategies. The county remains committed to the EAP and the emission reduction strategies listed below.

- County Council agreed to participate in the early action program in December 2002. Since that date, the county has maintained its commitment to pursuing each of its emission reduction strategies to the fullest extent possible, and will continue to look for new and innovative ways to promote cleaner air countywide.
- Preliminary data from SCDHEC shows that for the first time since the new federal standard went into effect, the three-year average of fourth highest ozone concentrations at each of the three ozone monitors located in Richland County now meet the tougher standard.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

County Council agreed to participate in December 2002. The process continues through 2007.

14. Develop City and County Energy Plan (Energy Conservation)

Description of Measure

An energy plan could be developed that directs municipal departments to reduce energy use. This could include retrofitting municipal buildings/city schools and street lights for energy efficient, i.e. "Energy Star" Program, white roofs, etc., promoting transportation alternatives, and encouraging recycling and composting.

- a. Richland County currently promotes internal recycling in the administration building, as well as other county-owned buildings. Recycling bins are placed throughout the building, ranging from white paper to aluminum can receptacles. We remind employees to turn off lights and computers when not in use.
- b. County Council is currently considering the possibility of hiring an energy conservation contractor to survey county buildings for inefficiencies and to plan for financing any needed upgrades to county facilities.
- c. The City of Columbia has proceeded and is currently considering proposals for an energy conservation contractor.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed, with continuing reminders and further implementation pending Council action.

15. Assign staff to become air quality contact/expert for jurisdiction

Description of Measure

The staff member assigned as air quality contact is also the expert for the jurisdiction.

- Please see Measure 2, Assign a county air quality contact.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2003 and continuing.

16. Encourage Mass Transit (transportation choices and alternatives)

Description of Measure

All Richland County citizens have access to mass transit.

- Use of mass transit is specifically encouraged for county, city and state employees.
- Palmetto Health Richland and Baptist are the first and second largest users of the bus system respectively.
- Since education and awareness foster ozone awareness and to educate and motivate individuals to take actions to minimize ozone pollution” section g. foster use of public transit, this measure has been included as part of measure 9,” Implement a program to

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed and continuing with continuing reminders.

17. Encourage not overfilling your fuel tank.

Description of Measure

Stop when the nozzle clicks off.

- This information is contained on fliers that are posted throughout county departments. The flier is also online, and available to the public.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2003 and continuing.

18. Restrict mowing days and times all year, especially during ozone season/ozone action days. Promote the use of electric and propane lawnmowers

Description of Measure

Ozone action days will be a factor in scheduling county activities. Also, the county seeks to communicate to large landscaping firms asking for cooperation and encouraging all in the county to refrain from use of gas-powered equipment on ozone action days.

- Per the Richland County Administrator's directive, all mowing and the use of gas-powered lawn equipment on County property should be restricted on Ozone Action Days (orange and above), when manageable. In addition, the County will seek to landscape facilities in ways that reduce equipment use, thereby requiring lower maintenance, and resulting in fewer emissions. This directive went into effect on October 8, 2004.
- Lawnmower exchange event - Working with Lexington County, DHEC, and other sponsors, Richland County is currently planning a lawnmower exchange event to be held in the Summer of 2006. During the event, citizens will be able to turn in an old gasoline-powered engine in exchange for a discount on a new, electrically-powered lawnmower. This event will be the first of its kind held in the State of South Carolina. Due to staff changes at Richland and Lexington County, this event was pushed back from Spring 2006 to Summer 2006. Richland County is currently working with DHEC and Lexington County to finalize the exchange, which is planned to take place in Summer 2006.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2004 with continuing restrictions.

19. Consider Tree Planting/landscaping standards.

Description of Measure

Planted trees reduce the need for air conditioning, reduce the heat island effect in urban areas, and reduce energy usage. Tree ordinances could be drafted to establish minimum tree planting standards for new development; and to promote strategic tree planting, street trees, and parking lot trees.

Landscaping standards are included in the Land Development Code. Tree ordinances have been drafted to establish minimum tree planting standards for new development, and to promote strategic tree planting, street trees, and parking lot trees. Stringent specifications are laid out in this section along with repercussions for not abiding by these standards.

- The Land Development Code's proposed implementation date is January 1, 2005.
- The Planning Commission transmitted its recommended draft of the Land Development Code to the County Council on 12/31/03 and the Landscaping Standards, Section 26-176 on 2/13/04. The New Land Development Code - Effective 7/1/05 - revised 11/9/04 is available online at:
<http://www.richlandonline.com/information/town/LandDevelopmentCode110904.pdf>
Landscaping Standards, Section 26-176 is located on pages 254 through 270.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed. New Land Development Code effective 7/1/05.

20. Reduction of NOx and VOC emissions at International Paper (IP): Eastover Mill

- The Eastover facility has utilized the “best available control technology” on all of their NOx and VOC emission units at the time of initial installation, and subsequently as part of any significant modification. The power boilers at the Eastover Mill produce low NOx emission levels because of both their design (e.g. tangential firing) and fuel type (e.g. waste wood). One power boiler at the Eastover Mill is covered under the “NOx SIP” and is expected to have emission levels well below their current allocation.
- An MOA was signed with International Paper in which the facility agreed to take an annual allowable Nox emission reduction of 1,000 tons at the Eastover Mill facility. The Title V permit for the Eastover Mill provides for allowable NOx emissions totaling 5,155 tons/year. The facility-wide annual allowable NOx reduction will reduce allowable NOx emissions at the Eastover Mill from 5,155 to 4,155 tons/year. This agreement went into effect on August 12, 2004.

Estimate of Emission Reductions (if available)

No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2004.

21. Reduction of emissions at SCE&G: Wateree Plant

- An MOA was signed with the SCE&G Wateree facility in which the facility agreed to take permit limits on two coal-fired boilers during the ozone season as their commitment to the EAC process. NOx emissions from any boiler equipped with selective catalytic reduction systems are not to exceed .15lbs/MMBtu averaged over a 5-month period. This agreement went into effect on September 27, 2004.

Estimate of Emission Reductions (if available)

No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2004.

22. Prohibit/limit/ban open burning. Encourage mulching clearing debris as an alternative to burning

- Richland County's Code of Ordinances prohibits all fires within the right-of-way of any street, road, or highway except in certain cases. Open fires may be set in performance of an official duty of any public officer when deemed necessary to protect property, life, or the public welfare. Salamanders or other devices may be used for heating by construction or other workers, provided no nuisance is created.
- Open burning is prohibited within any "residential" zoning district (with a few exceptions). During a pollution alert declared by duly constituted authority, any and all open burning shall be unlawful. (Codified in Richland County Code of Ordinances, Section 10-1.)

Estimate of Emission Reductions (if available)

DHEC estimates that these restrictions will result in a reduction of 54.16 tons of VOC's per season, and 11.4 tons of NOx per season. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Status

Completed in 2004 with continuing enforcement.

Measures not included in the December 2004 SIP submittal

The following activities were not listed in the December 2004 SIP submittal under Appendix 8 – Local Action Plans, but are additional measures achieved in the Richland County Area.

****Described in Appendix 16 – County Level Emission Reductions and Descriptions For the Ozone Early Action Compact Areas of the December 2004 SC SIP submittal.**

1. School bus retrofit project (SC Department of Education) **

The South Carolina Department of Education will retrofit approximately 21 diesel buses with particulate filters during 2006. (SC Department of Education. Additional reductions of PM are also expected.) The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the retrofitting technology being applied works best with this new fuel type. The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at retail stations beginning summer 2006.

DHEC estimates that these retrofits will result in a reduction of 357 lbs of VOC's per year as well as 2,499 lbs of CO per year.

In addition:

- The Department of Education has been awarded a Clean School Bus USA Grant for \$499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot.
- State Education Superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly \$36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles.
- The benefits from these South Carolina Department of Education (SDE) funding sources will be distributed throughout the state. The SDE has agreed to make York County and the five deferred areas the top priority in assigning new and retrofitted buses to service. SDE is also partnering with private companies and local school districts to provide specific funding for school bus retrofits and clean air programs.

Status: To be completed in 2006.

2. Biodiesel buses at the University of South Carolina **

The University of South Carolina, located in Richland County, has begun using 80/20 biodiesel to fuel several of its shuttle buses. The program began in 2002 with a grant from the DOE to offset the marginal cost of biodiesel fuel, and benefited from the long-term loan of a tank from United Energy.

DHEC estimates that this program will result in a reduction of 12 lbs of VOC's per year, 25 lbs of NOx per year, and 34 lbs of CO per year.

Status: Completed.

3. **University of South Carolina Ethanol Project ****

The University of South Carolina, located in Richland County, has begun replacing regular gasoline vehicles with alternative, flexible-fuel vehicles, and has installed E85 infrastructure to supply those vehicles. (Other smaller gasoline-powered vehicles have been replaced with electric vehicles.)

DHEC estimates that this program will result in a reduction of 18.9 lbs of VOC's per year, 18.3 lbs of NOx per year, and 1250 lbs of CO.

Status: Completed, with continuing future vehicle replacements.

4. **SCDHEC Initiatives in Richland County**

SCDHEC, headquartered in Richland County, has initiated programs that encourage employees to choose pollution-reducing transportation alternatives. DHEC also has a number of flex-fuel vehicles which run almost exclusively on E85.

- a. **"Take a Break from the Exhaust"** runs during the ozone season and reduces the number of miles traveled in Richland County. **

DHEC estimates that these programs will result in a reduction of 568 lbs of VOC's per ground level ozone season, 393 lbs of NOx per ground level ozone season and 5,494 lbs of CO per ground level ozone season.

Status: Completed.

- b. The use of **flex-fuel vehicles** has resulted in the displacement of approximately 23,500 gallons of gasoline annually. **

DHEC estimates that this program will result in a reduction of 104 lbs/yr of VOC's, and 103 lbs/yr of NOx and 6,030 lbs/yr of CO.

Status: Completed.

5. Kerosene container exchange event

Working with Lexington County, DHEC, and other sponsors, Richland County is currently planning a kerosene container exchange event to be held in 2006 or 2007.

Status: This event is currently in the planning stages.

6. Develop Air Quality Awareness and Improvement Policy **

On October 8, 2004, the County Administrator issued a directive for the purpose of establishing policies by which air quality and awareness will be improved via recurring activities of County government. Details of the policy include:

1. Ensure that all employees continue to be notified of upcoming ozone action days. Notification occurs via email.
2. Departments allowed to promote flex-scheduling where feasible. Certain employees in emergency services departments are unable to practice flex-scheduling, but other operational departments are allowed to promote this option where manageable.
3. Richland County has several Tier II compliant vehicles and pieces of equipment currently in its fleet and will increase this number. Richland County had budgeted for 13 alternative fuel vehicles (AFVs) in FY 2004-2005, with an increase in the purchasing of AFVs thereafter. It shall be the goal of the County that by 2010, 30% of the County fleet will be the lowest emission vehicles practical.
4. All County vehicles and equipment are operating according to the manufacturer's specifications, and shall continue to do so. Richland County currently uses recyclable oil filters with an extended service interval capacity, which allows the county to perform oil changes at 4,000 or 5,000 miles instead of 3,000. Richland County seeks to incorporate synthetic oils and fluids in its maintenance program, which offer superior protection and longer service intervals.
5. Drivers are required to eliminate vehicle idling. Exceptions include emergency vehicles, traffic/weather conditions, and vehicles being repaired, maintained, or inspected. These exceptions should occur only as reasonably required for specific operations.
6. Restrict mowing and use of gas-powered lawn equipment on County property on Ozone Action Days (orange and above) where manageable.
7. The County will seek to landscape facilities in ways that reduce equipment use, thereby promoting lower maintenance, resulting in fewer emissions.
8. During a pollution alert, such as an ozone action day, all outdoor burning shall be unlawful. (See Richland County Ordinance Chapter 10, Section 10-1.)

9. Richland County will continue to practice energy conservation in all County facilities. Conservation measures include turning off lights and computers on nights, weekends, and on holidays. Strong emphasis and preference will be placed on purchasing Energy Star compliant products.
10. Recycling efforts shall remain ongoing at County facilities.

Status: Completed, with continuing reminders and compliance monitoring.

7. Promote bicycling and pedestrian strategies as an alternative to driving

Richland County is committed to promoting bicycling and walking as an alternative to driving by providing greater access to bicycle and pedestrian pathways.

a. Columbia Cycle Summit

A Columbia Cycle Summit was held on Friday May 12, 2006 at EdVenture in Columbia. Andy Clarke, Executive Director of the League of American Bicyclists, was the keynote speaker. The workshop's goal was to develop an action plan for the city in order for Columbia to be designated as a bicycle friendly community by the league.

Status: Completed.

b. Bicycle and Pedestrian Pathways Plan

On May 13, 2006, the Central Midlands Council of Governments unveiled a proposal, known as the Bicycle and Pedestrian Pathways Plan, which calls for 26 cycling projects to be completed in and around the City of Columbia in the next two years. Included in the plan are new bike lanes on area roads, as well as new lanes on an abandoned rail line.

Status: Plan completed, implementation pending funding.

a. Columbia Cycle Summit

The USC Prevention Research Center and the SC Department of Transportation invite held a live broadcast of "Bicycle/Pedestrian Planning Strategies: From SAFETEA-LU to Safe Routes to School" on May 4, 2006, from 1:00 to 4:00 pm, EDT, at the Moore School of Business.

The purpose of this broadcast was to highlight key bicycle and pedestrian provisions of SAFETEA-LU and the administrative efforts underway to implement them. In addition, a panel of stakeholders discussed their successful programs and initiatives. These presentations provided insight into the broad range of activities supported by the legislation and offered guidance on implementing programs in communities across the country.

Status: Completed.

8. Expand e-government technology to cut down on unnecessary trips to county buildings

Richland County has greatly expanded its e-government options. Using e-government to allow citizens to make tax payments, download forms, view maps, and have their questions answered will allow for fewer trips to the county administration building.

- **Online tax payments** – Completed
- **Online business license payments** – Completed
- **Online forms database** – Completed
- **Online GIS Mapping application** – Completed, with continuing upgrades

9. Santee Cooper's "Green Power" Generating Station

Santee Cooper's third "green power" generating station began operation in Richland County on April 6, 2006. The \$8.5 million facility is located at Waste Management's Richland County landfill near Elgin. Methane gas produced by decomposing waste at the 124-acre landfill fuels a 5.5-megawatt gas-turbine generator.

The voluntary "green power" program is offered to residential customers in blocks of 100-kilowatt-hours each. Because it costs more to produce "green power" than by conventional means, a \$3 premium is charged on a customer's monthly electric bill.

Status: Completed.

10. Create a regional partnership to deal with air quality issues

Following a meeting with Myra Reece, Bureau Chief for SCDHEC's Bureau of Air Quality, on October 5, 2006, the Richland County Administrator began dialogue with the Lexington County Administrator to gauge Lexington County's interest in undertaking a regional approach to air quality issues, coordinated by the Central Midlands Council of Governments. Lexington County has expressed interest in a regional approach. A letter will be drafted to the COG in early 2007, and signed by the administrators of both counties.

While this measure is currently in the earliest stage, this represents a significant step forward in bringing both counties together in an effort to solve a regional issue on a regional level.

11. Participation in Early Action Compact Summit

Richland County was the location for SCDHEC's first ever statewide Early Action Compact Summit on August 16 and 17, 2006. The conference was attended by over 200 participants. A number of information sessions were held on topics such as alternative fuels, education and outreach, and land use. A number of vendors were also on hand to promote energy saving and pollution-reducing technologies.

A number of county staff attended the summit, including the Research Manager/EAC Contact, Joe Cronin; Grants Manager, Audrey Schifflett; Fleet Manager, Bill Peters; and Planning Manager, Michael Criss. Many local leaders, such as the Mayor of Blythewood, Pete Amoth, were also in attendance.

12. SCE&G SO2 Wet Scrubber for Wateree Station

SCE&G, Fossil-Hydro Generation, has initiated an Engineer/Procure/Construct (EPC) contract with Fluor Corporation to place into operation a single tower SO2 wet scrubber for Wateree Station. The current plan has both units at Wateree discharging the flue gases into a single wet SO2 scrubber tower. While SCE&G has not yet finalized the equipment supplier, they anticipate a wet SO2 scrubber optimal removal efficiency to be 92-98%.

Based on 2005 SO2 emissions, and factoring in maintenance and operating conditions, a removal rate of approximately 40,000 Tons annually may be achievable. Until the final supplier is selected and actual performance information is measured on the completed project will we have confidence in the actual removal rate.

Also, with the installation of the wet SO2 scrubber, a side benefit may be a reduction of mercury emissions; however, this possible reduction won't be determined until project completion and final testing.

Currently, this project is tentatively scheduled to start in 2007 and should be completed by early 2010.

13. Free Showing of Kilowatt Ours: A Plan to Re-Energize America at USC

A free Showing of Kilowatt Ours: A Plan to Re-Energize America was held at USC on September 13, 2006. Director Jeff Barrie was on hand to lead a discussion after the showing on topics such as mountaintop removal mining, air pollution, global warming, childhood asthma, and mercury contamination.

14. Columbia announced as one of four locations for hybrid bus demonstrations

Columbia was announced as one of four cities where a 37-passenger hybrid bus will be demonstrated.

The local initiative was brought about by a partnership between USC, the S.C. Research Authority, and the Central Midlands Regional Transit Authority.

It is expected that the hybrid bus will be in operation by the time Columbia hosts the National Hydrogen Association's annual meeting in Spring 2009.

15. City of Columbia signs Mayor's Climate Protection Agreement

On October 10, 2006, Mayor Bob Coble and the Columbia City Council signed the Mayor's Climate Protection Agreement, joining nearly 300 other cities nationwide who have also signed onto the agreement. By signing the agreement, the city has agreed to undertake methods designed to cut greenhouse emissions such as carbon dioxide and methane by 7 percent by the year 2012. Because of its pledge to reduce global warming and pollution, the South Carolina Chapter of the Sierra Club designated Columbia as a "Cool City."

16. City of Columbia unveils eWaste Program

The City of Columbia has announced that beginning December 1, 2006, residents can turn in any electronic device, including unwanted radios, computers, televisions, appliances (except refrigerators), consumer electronics, etc. at a local drop off facility on Colonial Drive for recycling. All electronic devices will then be taken to an Aiken-based company, Global Recovery, to recycle.

17. City of Columbia votes to protect two acres of trees

On October 18, 2006, the City of Columbia approved a plan that would allow Dreher High School to build new athletic facilities on a parcel of land near Owens Field Airport. Residents feared that two acres of trees would be lost under the school district's preferred option, however the city approved an option that would reconfigure an existing skateboard park in order to preserve the existing trees.

18. City of Columbia initiates Climate Protection Action Committee

As an extension of its commitment to improving air quality, the City of Columbia initiated a Climate Protection Action Committee, commonly referred to as a "green committee." The committee is made up of a citizen's committee, comprised of council appointees, as well as an advisory committee, consisting of local air quality professionals, city staff, Richland and Lexington County EAC contacts, and DHEC representatives. The committee will be divided into several subcommittees, to study topics such as education and outreach, energy conservation, alternative fuels, and land use planning. The committee will issue recommendations to City Council on ways that the city can reduce air and other types of pollution in early 2007 from the city's 56 buildings and fleet of 100 vehicles. The CPAC will also plan a community-wide summit, scheduled to take place in May 2007. The first CPAC meeting took place on November 30, 2006.

19. Greater Columbia Fuel Cell Challenge

Six awards, totaling over \$150,000, were given to local organizations to spark the use of fuel cells in the Columbia area during the annual meeting of EngenuitySC. Awards included:

- Segway Personal Transport Units for the University of South Carolina
- A backup power system at Benedict College
- A citizen's school for hydrogen and fuel cell technology
- A hands-on exhibit at EdVenture Children's Museum
- Portable batteries for television cameras at SC ETV
- A first responders extended power pack for law enforcement and emergency officials

The fuel cell challenge was project of the USC Columbia Fuel Cell Collaborative, which includes EngenuitySC, the University of South Carolina, the City of Columbia, and the S.C. Research Authority.

20. Melting Pot of Columbia unveils fondue-powered vehicle

Jay Kilmartin, owner of a Columbia Restaurant, the Melting Pot, recently purchased and converted an old ambulance to run on used canola oil from the restaurant. The owner purchased the ambulance on eBay.com and converted it from diesel powered to vegetable oil powered. The vehicle now runs on used oils from fondue. The vehicle is painted in the restaurant's color scheme and features The Melting Pot logo and tagline on each side. The owners have been featured locally, as well as on national news and talk shows, such as the Glenn Beck Show. The ambulance has drawn attention to the use of alternative fuels both in the Columbia area, and around the U.S.

21. Emergency Funding for CMRTA System

In early 2006, Richland County Council was informed by the Central Midlands Transportation Authority that their transitional funding would run out at the end of the year, and if funding was not obtained by that time, service would be cut by up to 85% in Richland and Lexington Counties. After weighing several options, Richland County passed an ordinance in October to increase its road maintenance fees by 16 dollars for personal vehicles, and 24 dollars for commercial vehicles. The revenues from these fees, approximately \$7.5 million, will allow the bus system to maintain its current level of service until a permanent funding source is found. The CMRTA provides a critical service in the Midlands, having provided approximately 2.6 million trips in FY 05-06.

22. Richland County Transportation Study Commission

As part of its temporary funding solution to the CMRTA crisis, Richland County

Council established a Transportation Study Commission to study public transit, road improvements, and walking and bicycle trails. The 33 member commission is expected to release a final report in Spring 2008, as well as a recommendation for funding high-priority transportation projects.

The commission will study transportation issues that are regional in nature. As a result, members will be made up of appointments from Richland and Lexington County Councils, the City Councils in Columbia, Cayce, and West Columbia.

23. Automated vehicle location and tracking system

Richland County recently unveiled an Automated Vehicle Location system, which was highlighted in a recent article in the State newspaper. The system, resulting from a collaboration between the Fleet Manager, IT and GIS staff, will allow the county to track and monitor vehicles in the county fleet at any point in time. The system has safety, management, and air quality applications. Specifically, staff can track and monitor data obtained electronically to see if drivers are using the most economical routes on routine projects, thus reducing fuel costs and emissions from county vehicles.

24. Promotion of Arbor Day and related activities

Richland County Council declared November 25th through December 5th Arbor Day Week. Richland County Government staff and officials partnered with the Richland County Public Library, St. Martin de Pores school, the Governor's Office, the City of Columbia, State Forestry Commission, and the Congaree National Park to organize a variety of events. It has been a highly successful week, including a tree planting in honor of Richland County's 1st ever Arbor Day Baby.

The Midlands Arbor Day Committee hosted several events throughout the week of Saturday, November 25-December 5, 2006 in celebration of Arbor Day, which is Friday, December 1, 2006.

- Nov. 25:
 - Richland County Main Library, Arbor Day Story Time.
- Nov. 27:
 - State House Ceremony- Governor Proclamation and Tree Planting, West Side Grounds.
- Nov. 28:
 - St. Martin de Porres Catholic School, Arbor Day Presentation, 4th grade Students.
- Nov. 30:

- Polo Road Elementary School, Arbor Day Presentation, 3rd-6th grade Students;
- Live Oak Tree Planting and Arbor Day Speaker Tim Womick and an appearance by Councilwoman Val Hutchinson.
- Dec. 1:
 - Tree Planting for 2005 Arbor Day Baby;
 - 2006 Arbor Day Baby Announced;
 - City of Forest Acres School Program, Satchel Ford Elementary School, Proclamation from Mayor Brunson, Live Oak Tree Planting and Dogwood seedlings distributed to children;
 - City of Columbia School Program, Carver-Lyon Elementary School- Multi-Purpose Room, 3rd grade Students, Arbor Day Speaker Tim Womick, Proclamation by Mayor Bob Coble and Live Oak Tree Planting;
 - University of South Carolina Students Allied for a Greener Earth, West Quad Learning Center, Speaker Presentation by Rudy Mancke and a Tree Planting dedication ceremony in Dr. Bruce Coull's honor, the former Dean of the School of the Environment.
- Dec. 2:
 - Congaree National Park Nature Walks
- Dec. 5:
 - Clemson REC at Sandhill, Tree Planting at the Historic Administration Building

Organizations comprising the Midlands Arbor Day Committee were Richland County, City of Columbia, SC Budget and Control Board, Columbia Tree and Appearance Commission, Richland County Appearance Commission, Richland County Conservation Commission, Richland County Conservation District, Forestry Commission, USDA-Natural Resource Conservation Service, Congaree Land Trust, and the City of Forest Acres Appearance Commission.

25. Lawnmower exchange survey and planning

As part of our planned lawnmower exchange (scheduled to take place in spring 2007), Richland County, Lexington County, and DHEC jointly crafted and distributed a lawnmower survey in October 2006. The survey went out to employees at each entity, neighborhood leaders, community organizations, and a link was posted on the Richland County website. The survey generated nearly 200 responses. These responses provide the necessary "market research" that will ensure that the event maximizes its success.

26. Ozone Action Days

The county received information from SCDHEC forecasting two Ozone Action Days in the summer of 2006 (June 22 and August 2, 2006.) Prior to each day, county staff send out emails to all county employees with the following message (a sample from the June 21 message):

The following information was received from the SC Department of Health and Environmental Control:

Air Quality Index for Thursday, June 22

ORANGE (104 AQI) - Unhealthy for Sensitive Groups

Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.

****OZONE ACTION DAY for Midlands, Upstate and CSRA for Thursday**** Monitor readings across the Upstate, Midlands and CSRA on Wednesday afternoon were indicating that very efficient ozone production conditions are currently in place. With the overall weather pattern changing very little for Thursday, that is, with high pressure over the area at the surface and aloft, ground-level ozone production should once again be very efficient with the possibility that a monitor or two in the Upstate, Midlands and CSRA could peak in the code ORANGE category.

There are many things you can do to limit air pollution on ozone action days and throughout the year. To learn more about ozone, and for helpful tips on the things you can do to improve air quality in our community, please visit <http://www.rcgov.us/information/ozone/home.asp>.

For additional information concerning the air quality forecast, please visit the South Carolina Department of Health and Environmental Control air quality forecast website at <http://www.scdhec.net/ozone>.

27. Northeast Richland Traffic and Road Improvement Meeting

On December 6, 2006, Councilwomen Val Hutchinson and Joyce Dickerson held an informational meeting with residents and leaders from the rapidly growing Northeast area of Richland County. The meeting included a presentation by Norm Whitaker, head of the Central Midlands Council of Governments, regarding the transportation priorities and funding mechanisms for roads in the Northeast. Mr. Whitaker explained the correlation between congestion, growth, and air quality in the Northeast, and informed attendees that the ozone monitor located at Sandhill has the potential to draw the entire two-county region into non-compliance. The committee resolved to meet on a quarterly basis in an effort to centralize the often fractured discussion of transportation needs on this rapidly growing area of the county. Councilwomen Dickerson and Hutchinson also received suggestions from the group as to how Council can better plan for transportation needs in the

Northeast, including accelerating an update of the county's comprehensive plan, as well as a comprehensive countywide transportation plan.

28. City of Forest Acres Considering Switching to Biodiesel

In September 2006, Forest Acres city administrator, Mark Williams, informed members of city council that he was interested in using B20 biodiesel as an alternative to diesel in the city's fleet of vehicles. The switch is expected to cost approximately \$13,000 initially, however, this would provide the city with a cleaner, renewable, and domestically produced fuel alternative. The city has eighteen vehicles, including trash loaders and recycling trucks.

If Forest Acres makes the switch, it would join the city of Columbia (which is experimenting with biodiesel in two trucks, with the possibility of expanding that to about 300 diesel vehicles) and the city of Cayce, which is using biodiesel in 30 vehicles without substantial cost or maintenance issues.